

On the Contribution to the National Economy of Housing Mortgage

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Abstract

Mortgage has made great contribution to the national economy, but other scholars believe that the contribution isn't from the stimulation of mortgage to housing investment and housing consumption. According to the Wealth Effect, which means the value of capital growing may lead to the growth of consumption, housing mortgage increases the value of resident's fixed assets, which leads to the growth of national economy. Housing is the residents' personal assets, and the resident's housing appreciation will lead to its own family housing wealth effect. Based on the permanent income theory, increasing dweller family wealth will then lead to consumption growth, so that the housing mortgage will promote the overall development of the national economy. That's the reason of the contribution of the housing mortgage to the national economy.

Keywords

Housing Mortgage; Wealth Effect; National Economy

The Introduction of Housing Mortgage in China

Housing mortgage refers to the behavior that mortgagors borrow money for purchasing houses from banks and other specialized institutions by pledging their commercial residential buildings as security. To be more specific, banks and other banking institutions provide housing mortgage for prospective borrowers. The prospective borrowers can be individuals or families. The mortgage is used for purchasing a house which is also the object of pledge. The loan interest is calculated according to a fixed or a floating one. The capital and interest occurred in this mortgage should be repaid by instalment within a long period of time.

Personal housing mortgage first started in China in 1987 and has entered into fast development since 2000. According to the data from www.ce.cn, the ratio of personal housing mortgage balance to gross national product has been increasing at the rate of 1% per year on average in China since 1998. So the relativity between housing mortgage and national economy has attracted more attentions of scholars.

The Relativity between the Housing Mortgage and the National Economy

Although no scholar has ever done Granger causality test before on housing mortgage and national economy, Minggang Ou argued that housing mortgage would drive economic growth by increasing the housing investment [1], housing consumption and propensity to consume after he studied the economic impact resulting from housing mortgage increase since 1998. Based on Granger causality test, Kangping Wu proved that the real estate consumption drove economic growth [2]. Moreover, Tiemei Gao proved that housing investment had long-term impact on economy and related industries [3].

Based on the above conclusions, many scholars think that housing mortgage drives economic growth by housing investment and consumption. The development of housing mortgage market will expand housing investment and consumption and bind national economy together with real estate market, thus leading to economic bubbles [4].

As Minggang Ou's quantitative study on the relativity of housing mortgage and national economy [1] was rather simplistic and didn't test the share of contributions of housing mortgage. Chongrun Wang brought the following

conclusion after analyzing the data from 1991 to 2003 [5]:

$$g = 0.2095 + 0.0237 \ln \frac{HM}{CRDT} + 0.0020 \frac{DHC}{DHM} + 0.0009 \frac{DHI}{DHM} + 0.0940 \ln \frac{SAV}{GDP} - 0.2542 \ln \frac{M2}{GDP} + 0.0885 PERCAPIR$$

$$R^2=0.96, F=26.57$$

In this formula, g is the economic growth rate. $HM/CRDT$ is the ratio of housing loans balance to credit balance, representing housing finance deepening level. DHC/DHM means the ratio of housing sales growth to housing loans balance, representing housing marginal propensity to consume of housing mortgage. DHI/DHM is the ratio of housing investment increment to housing loans balance incensement, representing housing marginal propensity to invest. SAV and M_2 are urban and rural residents' savings and broad money supply, respectively. $PERCAPIR$ means capital growth rate per capita.

Through regression analysis, Chongrun Wang believed that housing loans made great contribution to economic growth. Every 1% growth in housing loans market brought 0.0237% increase in economic growth rate. He also held that housing consumption and investment growth caused by housing mortgage contributed little to economic growth rate. Every 1% growth in marginal propensity to consume and investment of housing loans brought 0.002% and 0.0009% economic growth, respectively [5].

Different from general opinions, Chongrun Wang agreed that housing loans made great contribution to national economic development indeed, but this growth was not caused by housing investment and consumption [5]. As to how housing mortgage effects our national economic development, there still lack of a detailed discussion and theoretical researches [6].

How the Housing Mortgage Make Contributions to the National Economic Growth

Housing is both consumption and investment goods [7]. It is also personal assets for a family that has home ownership. According to Pigou's theory, if the actual value of residents-held currency and government bonds increases, residents' consumer expenditure will increase [8]. This will result in the increase of consumption goods production and social employment, greatly driving the economic growth. The fact that the increase of personal wealth boosts the development of the whole national economy is called wealth effect.

Housing belongs to the category of personal assets. Residents' expectations on housing appreciation lead to the wealth effect of families who have their own housing assets. According to permanent income theory, residents' decisions during consumption mainly depend on acquirable average earnings within a quite a long period of time, also named permanent income.

$$C_1 = \beta \times PerIncome \quad (1)$$

C_1 is residents' expenditure to date. $PerIncome$ and β represent permanent income and its marginal propensity to consume, respectively. By decomposing the permanent income, we can know that $PerIncome = Capital_1 + Salary$, among which $Capital_1$ is residents' total assets, also called the amount of wealth. $Salary$ refers to labor income.

$$C_1 = \beta_1 \times Capital_1 + \beta_2 \times Salary \quad (2)$$

β_1 and β_2 are the marginal propensity to consume of assets and earned income respectively and $0 < \beta_1 < \beta_2 < 1$.

Suppose that residents' personal assets only refer to housing assets and the residents live in an environment that they can liquidate housing assets easily, the housing price will keep rising during a period of time that allows consumer expectations.

Without housing mortgage, the consumption increment is

$$\Delta C_1 = \beta_1 \times \Delta Capital_1 + \beta_2 \times \Delta Salary \quad (3)$$

In this equation, the level of residents' labor income will not face a big change within a given period of time. We can get $\Delta Salary = 0$.

Once using housing mortgage, residents will be bound to be in debt to have their own housing. Assume $Capital_2$

refers to residents' total assets after having housing mortgage, then $\text{Capital}_1 = \text{Capital}_2 - \text{Debt}$, thus Equation (3) will transfer into

$$\Delta C_2 = \beta_1 \times \Delta \text{Capital}_2 + \beta_2 \times \Delta \text{Salary} - \beta_3 \times \Delta \text{Debt} \quad (4)$$

Equation (4) shows that although the current interest rate of housing mortgage in China is adjustable, its amplitude of fluctuation will not be so obvious as housing price. Repayments of loan on mortgage is fixed amount basically. We can get $\Delta \text{Debt} = 0$.

Through the comparison of Equation (3) and (4), we can find that, after having housing mortgage, $\Delta \text{Capital}_2 > \Delta \text{Capital}_1$, leading to residents' consumption increase $\Delta C_2 > \Delta C_1$. So the housing mortgage boosts residents' wealth effect.

Generally speaking, with the development of housing mortgage market, more and more residents will have their own housing with the help of housing loans, increasing residents' wealth effect, expanding consumption and investment and promoting economic development.

Conclusions

According to the analysis above, housing mortgage promotes economic development by increasing the wealth effect and stimulating the consumption of the residents rather than promoting housing investment and housing consumption. Now, the authorities have introduced a slew of policies to limit the speculative buying. On the whole, home ownership with housing mortgage is rational demands. Therefore, housing mortgage will not stimulate the property price to result in the entire economic bubble.

Currently, some scholars think the overheated development of housing loans market is one of the reasons for the whole economic bubble [9]. They expect that national economy will bind with realty industry and constrain the development of housing mortgage. According to the quantitative analysis of Chongrun Wang [5], we can find that housing mortgage makes great contribution to the whole national economy in China. Housing mortgage will not bind national economy with realty industry. It will simulate consumption and expand domestic demand, finally promoting the whole development of national economy.

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